

I. *Rejections Under 35 U.S.C. § 103*

A. Alteon In View of He And Mockapetris

The Office rejects claims 1-13, 15-27, 29, and 30 as unpatentable under 35 U.S.C. § 103(a) over Alteon in view of He and Mockapetris. (Office Action at paragraph 7, page 2.) In making the rejection, the Office states that Alteon and He disclose hardware and methods for redirecting traffic in a client-server environment. The Office admits that these references, however, do not disclose any particular section of a DNS message to be modified to effect redirection of traffic. The Office asserts that Mockapetris discloses the structure of a DNS message. Based on these pieces of information, the Office concludes that it would have been obvious to one of ordinary skill in the art to modify the hardware and methods taught by Alteon and He to arrive at the presently claimed invention. Applicant traverses this rejection.

As stated before, the independent claims of the present application include processors or steps that involve modifying the question section of a DNS request, the answer section of a DNS response, or both.

As stated before, Alteon does not modify sections within a DNS request or response, and in particular does not modify the question section of a DNS request or the answer section of a DNS response. Indeed, Alteon does not disclose or suggest altering any section of a DNS request or response. Rather, Alteon is limited to changing the IP address of an IP packet. Applicant submits that the modifications Alteon discloses are distinct and different from the modifications recited in the present claims, and that Alteon's modifications, which are limited to changes in IP addresses at layer 3 of the OSI model, do not suggest the modifications recited in the present

claims, which modify the content of the question and/or answer sections of DNS messages at layer 2 of the OSI model. There is thus no disclosure in Alteon of all of the elements claimed in the present claims, and no motivation in Alteon to achieve the presently claimed invention. The missing subject matter and the motivation to alter Alteon to include that missing subject matter must thus be provided from another source.

As stated before, He does not disclose or suggest modify sections within a DNS request or response, and in particular does not disclose or suggest modifying the question section of a DNS request or the answer section of a DNS response. Thus, He does not cure the deficiencies of Alteon, with regard to subject matter and/or motivation.

The Office relies on Mockapetris to provide the subject matter that is claimed in the present claims, but missing from the disclosures of Alteon and He. The information provided by Mockapetris is, as the Office recognizes, merely a summary of the state of the art and merely provides information indicating the various fields that are present in a DNS message. The Office does not indicate where, within Mockapetris, any mention is made of modifying DNS messages to redirect them or redirect responses to them. Applicant submits that Mockapetris is completely silent in this regard, and thus provides neither a disclosure of such information or a suggestion of such information. Thus, Mockapetris fails to supply the subject matter and motivation that is missing from Alteon and He, but would be required to set forth a *prima facie* case of obviousness of the present claims.

Thus, even if one were to combine Alteon, He, and Mockapetris, one would still not arrive at the presently claimed invention. Specifically, to achieve the presently claimed

invention, one must at least replace Alteon's concept of IP Address modification with modification of the question and/or answer section of a DNS message, a concept that is neither disclosed nor suggested in any of the cited references.

Applicant submits that the only disclosure of the presently claimed invention is provided in the present application - Alteon, He, and Mockapetris do not approach it. Applicant further submits that the Office is relying on hindsight, *i.e.*, relying on Applicant's own disclosure, to make a connection between the disclosures of Alteon, He, and Mockapetris, and that of the present claims. It is impermissible under U.S. law and USPTO rules and examination guidelines for the Office to do so in this case because the only disclosure that could possibly guide one from the teachings of Alteon, He, and Mockapetris to the presently claimed invention can be found in the present application. To date, the Office has yet to identify a single portion of the cited references that discloses the presently claimed invention or motivates one to modify the cited references to achieve the presently claimed invention. Indeed, the references cited, alone or in combination, do not even contain all of the elements of the presently claimed invention, much less a motivation to modify Alteon or He to achieve the presently claimed invention.

Because neither Alteon nor He discloses or suggests modifying the question section, the answer section, or both, of DNS messages, and because Mockapetris fails to provide the missing disclosure and motivation, these three references, alone or in combination, fail to teach or suggest each and every element of the rejected independent claims.

Because dependent claims include all of the elements and steps of the claims from which they depend, the combination of Alteon, He, and Mockapetris fails to disclose each and every

element of the rejected dependent claims. Accordingly, the combination fails to render the rejected claims obvious. For at least this reason, Applicant requests that the Office reconsider and withdraw the rejection of claims 1-13, 15-27, 29, and 30 as unpatentable under 35 U.S.C. § 103(a) over Alteon in view of He and Mockapetris.

B. Alteon In View Of He, Mockapetris, and Macpherson

The Office rejects claims 14 and 28 under 35 U.S.C. § 103(a) as unpatentable over Alteon in view of He, Mockapetris and Macpherson. (Office Action at paragraph 8.) The rejection relies on the base rejection discussed in section I.A., above, and further on Macpherson for a teaching of a table with user location information. Applicant submits that the teachings of Macpherson do not remedy the deficiencies of Alteon, He, and Mockapetris, as discussed above with respect to independent claims 1 and 17.

The Office relies on Macpherson solely for the teaching of a table with data to be used in determining a user's geographical location. The Office does not assert that Macpherson discloses or suggests any other information relating to the presently claimed invention. Applicant agrees that the disclosure of Macpherson does not disclose or suggest the elements recited in independent claims 1 and/or 17.

Because Macpherson fails to disclose or suggest elements claimed in the present claims but not disclosed or suggested by Alteon, He, and Mockapetris, the combination of Alteon, He, Mockapetris, and Macpherson fails to disclose or suggest all of the elements of the presently claimed invention. Likewise, these references, alone or in combination, fail to provide motivation for one of ordinary skill in the art to alter Alteon or He to achieve the presently

claimed invention. For at least these reasons, Applicant submits that the invention claimed in claims 14 and 28 are unobvious over the combination of Alteon, He, Mockapetris, and Macpherson. Accordingly, Applicant requests that the Office reconsider and withdraw the rejection of these claims under 35 U.S.C. § 103(a).

C. Alteon In View Of He, Mockapetris, and Parekh

The Office rejects claims 31-41 as unpatentable under 35 U.S.C. § 103(a) over Alteon in view of He, Mockapetris, and Parekh. (Office Action at paragraph 9.) The Office relies on the combination of Alteon, He, and Mockapetris for the disclosures discussed above. The Office relies on Parekh for a disclosure of a system that identifies and stores IP addresses and geographical locations associated with them. Applicant respectfully traverses this rejection.

As discussed above, the combined teachings of Alteon, He, and Mockapetris fail to disclose or suggest all of the elements of the independent claims of the present invention. More specifically, the combined teachings fail to disclose or suggest processors or steps that involve modifying the question section of a DNS request, the answer section of a DNS response, or both. Thus, to render claims 31-41 obvious, Parekh must disclose or suggest this concept. Applicant submits that Parekh does not.

As the Office recognizes, Parekh is limited in its disclosure to developing a database to correlate users with their respective geographical locations. Parekh neither discloses nor suggests processors or steps that involve modifying the question section of a DNS request, the answer section of a DNS response, or both. Therefore, regardless of whether Parekh discloses or suggests subject matter relating to IP addresses and associated geographical locations, it does not

teach or suggest subject matter that is presently claimed but missing from the combined teachings of Alteon, He, and Mockapetris. In view of the failure of Parekh to supply subject matter that is claimed in present claims 31-41 but missing from Alteon, He, and Mockapetris, the combination of Alteon, He, Mockapetris, and Parekh fails to have rendered the invention claimed in claims 31-41 obvious.

For at least this reason, Applicant requests that the Office reconsider and withdraw the rejection of claims 31-41 as unpatentable under 35 U.S.C. § 103(a) over Alteon, He, Mockapetris, and Parekh. As noted above, if an independent claim (*e.g.*, claims 31, 37, and 39) is not rendered obvious by a combination of references, then claims depending from the independent claim are likewise not rendered obvious.

D. Alteon In View Of He and Shaikh

The Office further rejects claims 1-13, 15-27, 29, and 30 as unpatentable under 35 U.S.C. § 103(a) over the combined teachings of Alteon, He, and Shaikh. (Office Action at paragraph 7, page 11.) The Office relies on Alteon and He for the disclosure discussed above. The Office relies on Shaikh for the disclosure of modifying the DNS protocol (DNS message) to carry additional information, including the IP address of the user making a request. Applicant submits that the combined teachings of Alteon, He, and Shaikh do not disclose or suggest the presently claimed invention.

The disclosures of Alteon and He have been discussed previously, and their deficiencies, alone and in combination, have been discussed as well. In summary, to have rendered the presently claimed invention of claims 1-13, 15-27, 29, and 30 obvious, Shaikh must supply a

specific disclosure of the concept of or a motivation to modify the question section of a DNS request or the answer section of a DNS response. Applicant submits that the reference does not provide such a disclosure or motivation.

Shaikh discloses, on page 1809, left column under section V, that a way to improve DNS functionality would be to modify the DNS protocol to carry additional information to identify the actual client making a request. The two solutions proposed by Shaikh are to 1) modify the format of the question section in DNS messages, and 2) to define a new DNS resource record with type CA.

The first solution proposed by Shaikh requires altering the format of the question section of a DNS message. This is not only distinct from the solution captured by the present claims (see, for example, Mockapetris, page 16, which states that the format is distinct from the content of the question and answer sections of a DNS query), but is not backwardly compatible (a feature that does not result from implementation of the presently claimed invention). Furthermore, the solution would require all existing DNS servers and client software to be updated with new applications that support the new format, a feature that would not be required as a result of implementation of the presently claimed invention.

The second solution proposed by Shaikh requires a global re-defining of DNS message format to include a new resource record. This solution, like Shaikh's first solution, does not approach modifying the content of a DNS message question or answer section. Further, like Shaikh's first solution, this solution would require modification of DNS servers and clients to support the new proposed record type.

Applicant notes that it is important to understand that Shaikh appears to recognize that there are advantages to DNS message analysis and possible redirection, such as to connect a user with a geographically close server. Yet this reference, which suggests two ways of routing DNS messages to geographically close servers, does not disclose or suggest the presently claimed solution. Indeed, it teaches away from the presently claimed solution by providing two alternative solutions, yet never envisioning that other solutions could be possible.

In view of Shaikh's failure to disclose or suggest the concept of modifying the question section of a DNS request or the answer section of a DNS response, this reference fails to remedy the deficiencies of Alton and He with regard to rendering present claims 1-13, 15-27, 29, and 30 obvious. That is, the combination of Alton, He, and Shaikh fails to disclose or suggest all of the elements and steps of the rejected claims. Thus, the combination fails to have rendered these claims obvious under 35 U.S.C. § 103(a). For at least this reason, Applicant requests that the Office reconsider and withdraw this rejection.

## II. *Conclusion*


Applicant submits that all of the rejections raised in the Office Action of 19 December 2006 have been addressed and overcome. Accordingly, Applicant requests that the Office reconsider the outstanding rejections, withdraw them, and allow this application to issue as a U.S. patent in due course.



If the Office believes anything further is necessary to place this application in even better condition for allowance, Applicant requests that the Office contact his undersigned representative at the telephone number below to discuss the remaining issues.

Filed herewith is a Petition For Extension Of Time and the corresponding fee. Applicant believes that no other petition or fee is required to enter this paper. However, if a petition is required, please grant it, and if an additional fee is due, please charge the fee to Deposit Account No. 50-3740.

Respectfully submitted,  
Sezen UYSAL



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